

What is claimed is:

1. A LCD device comprising:

a first substrate on which pixels are arranged;

5 a second substrate coupled to the first substrate with
a sealing member in such a way as to form a gap between the
first and second substrates;

a liquid-crystal layer formed in the gap, the liquid
crystal layer being confined by the sealing member; and

10 spacers arranged in the liquid-crystal layer;

wherein the first substrate has a display region for
displaying images, the display region being defined to include
the pixels;

and wherein the first substrate has a non-display
15 region formed outside the display region, the non-display
region being located between the display region and the
sealing member;

and wherein the spacers are located in a first part of
the liquid-crystal layer corresponding to the display region
20 while no spacer being located in a second part of the liquid-
crystal layer corresponding to the non-display region.

2. The device according to claim 1, wherein the device is of a
type fabricated by a liquid-crystal injection method.

3. The device according to claim 1, wherein the device is of a type fabricated by a liquid-crystal dropping and substrate coupling method.

5

4. The device according to claim 1, further comprising a depression formed on an inner surface of the first or second substrate;

wherein the depression is located in the second part of the liquid-crystal layer, thereby forming a step between the display region and the non-display region;

and wherein the depression constitutes a buffer space for receiving extra liquid crystal.

15 5. The device according to claim 4, wherein TFTs are arranged on the first substrate in such a way as to be electrically connected to the respective pixels, and a dielectric layer is formed on the first substrate to cover the TFTs and the pixels;

20 and wherein the depression is formed in the dielectric layer.

6. The device according to claim 4, wherein a dielectric layer is formed on the second substrate;

and wherein the depression is formed in the dielectric layer.

7. The device according to claim 4, wherein one of the first and second substrates comprises a transparent plate having a depressed part on its inner surface;

and wherein the depression is formed by using the depressed part of the plate.

8. The device according to claim 1, wherein when the non-display region has a width L (μm) and the gap in the display region has an average value d (μm), the depression has a height H satisfying a relationship of

$$H \geq (1/2) \times (1000 + L) \times [0.02d + [L \times (0.02d/1000)]]/L \text{ } (\mu\text{m}).$$

9. The device according to claim 1, wherein the spacers are pole-shaped and formed on one of the first and second substrates.

20